READY, SET, GO

The Costs of Prerequisites for National Voluntary Accreditation of Public Health Agencies

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Executive Summary

Purpose of the Study

The question is an important one. Three prerequisites are required for a public health agency to apply for national voluntary accreditation, which begins in 2011. What does it cost, or what is it likely to cost, agencies to be eligible to apply? In other words, what are reasonable estimates for an agency to complete a needs assessment, a public health improvement plan, and a strategic plan? This study put special emphasis on finding the estimated costs of the community or statewide assessment and the community or statewide public health improvement plan for various sizes and types of agencies. In addition, the study identified several related findings.

Major Findings

1. Agencies do not always see a sharp distinction between the Community Health Assessment (CHA) and the Community Health Improvement Plan (CHIP). The CHA and CHIP are seen as a continuous process, not delineated actions and timeframes. Some agencies do not think in terms of a cycle, e.g. produce a community health assessment every 3-5 years, but rather in terms of continually updating the data and investing every year. This is especially true of the larger and more sophisticated or experienced departments.
2. Some agencies do not see value in producing published community assessments, including having a report at all. The focus instead is on the availability of data and information in numerous ways. As one agency put it, "Our role is to be the go to place for data and information."
3. Local health departments have a higher rate of completing more current community health assessments (63%) than tribal health organizations (44%) and are more likely to have completed more community health improvement plans that state health departments (49% versus 24%).
4. Factors correlated with local health departments having completed both a community health assessment and a community health improvement plan within the last 3 years include having an epidemiologist or health educator on staff; faculty or staff from an academic institution conducting program evaluations at the agency; and availability of behavioral risk factor data at the local level for use by the agency.
5. It is possible to find convergence on costs for small, medium and large agencies to perform assessments and plans. Key results include:

- Larger local public health agencies have several dedicated FTE that work on assessment, planning, and evaluation. Examples in cost range from $225,000 to $450,000.
- Middle sized public health agencies costs for assessments ranged from $62,279 to $170,918. CHIPs may add another 20% to the cost. The numbers tend to converge around the $100,000 level.
- Small agencies need from $20,000 to $50,000 to do MAPP; however, some can reduce costs through using strategic partnerships with academia.
- States vary in their roles as supporters of local health departments and initiators of statewide plans and assessments. There is some convergence around having 2.5 to 3 FTE to support the work at an estimated cost of $187,500 to $225,000 for staff on an annual basis. Explicit costs of statewide improvement plans (SHIPs) vary as well. In general, the costs for a SHIP range from $50,000 to approximately $300,000.

6. The State Public Health Agency can play key roles in supporting local public health agencies with community assessments and community health improvement plans. This includes providing data (including rates), technical assistance, and templates. State agencies also can provide financial incentives. These have been supported with state funds, stimulus funding, private funding, tobacco tax settlement dollars, emergency preparedness grants, and Preventive Health Block funding.
7. Agencies can reduce the costs of assessments and plans through strategic partnerships, especially with schools of public health, and through working with hospitals that have requirements for community benefit and community health assessments. Also, even modest incentives assist local health agencies in their ability to complete this work.

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Introduction

The public health community, through its major associations and agencies, determined that a National Voluntary Accreditation Program can move the field forward. Over the past several years, a system has been created to make accreditation a reality by 2011. Accreditation is seen as a way for an agency to "identify performance improvement opportunities, to improve management, develop leadership, and improve relationships with the community." (1) As of 2011, public health governmental agencies will be able to apply for recognition as accredited health departments.

There are three prerequisites that must be in place for a state, local, or tribal agency to have its application accepted by the Public Health Accreditation Board (PHAB). These are:

1. A community or state health assessment (CHA/SHA)
2. A community or state health improvement plan (CHIP/SHIP)
3. A strategic plan

These requirements to qualify for accreditation have some precedence. North Carolina has required all three of these documents prior to undergoing the accreditation process for the state of North Carolina. In addition, states such as Illinois with its I-plan and Pennsylvania with its requirements for affiliation with the State Health Improvement Plan have set similar requirements on local public health agencies. Colorado's 2008 legislation mandates that, in the future, local public health agencies will have a community health assessment and a community health improvement plan. A number of states have required all agencies to conduct a National Public Health Performance Standards Program (NPHPSP) review as part of their requirements for state contracts or grants. The adoption of these actions as an infrastructure routine is, however, spotty. Some agencies have 1, 2, or 3 of these actions, while others have none.

Meeting these requirements has the potential to become a significant barrier to those public health agencies which have not done one or more of these actions. This study looks at what various leaders in the field have learned about the costs of meeting the prerequisites, especially the assessments and the improvement plans. In addition, some guidance is offered regarding the cost of strategic plans and what has been learned from state accreditation costs. The methodology for this study is found in Appendix 1.

Definitions

State/Local Health Assessment

PHAB has defined assessment as "collecting, analyzing and using data to educate and mobilize communities, develop priorities, garner resources, and plan actions to improve public health…It involves the systematic collection and analysis of data in order to provide the health department and the community it serves with a sound basis for decision-making. It should include collecting statistics on health status, health needs, assets, resources, and other public health issues." (2) As Dr. Harvey Wallace, a member of the PHAB, states, "A Community Health Assessment is a systematic process, or group of processes, aimed at identifying the population health determinants in such a way that they can be addressed by the community and its partners. This process includes community health in its broadest definition and, while it may be coordinated by the health department, is the result of the work of various partners. It can include assets as well as problem issues." (National Association of Local Boards of Public Health Annual Meeting, August 6, 2010)

Statewide/Community Health Improvement Plan

PHAB has defined a community health improvement plan as "a long-term systematic effort to address issues identified by the assessment and community health improvement process. It is broader than the health department agency and should include community partners. A solid community health improvement plan can be used by partners to prioritize activities and set priorities." (3)

Strategic Plan

A strategic plan is internal to the health department. It often and ideally springs from the Health Improvement Plan and guides the health department in fulfilling its obligations from the Health Improvement Plan and in setting its priorities. It includes goals, objectives, strategies, and major initiatives.

Background

Public health agencies have used various frameworks to improve the public health system. Among these are MAPP, which stands for Mobilizing for Action through Planning and Partnerships; the National Public Health Performance Standards Program (NPHPSP); and Healthy People 2010 or Healthy People 2020 (HP 2010 and HP 2020). Of all of them, MAPP is the most frequently cited framework used by local health departments, while state agencies have used NPHPSP's state instrument more extensively.

MAPP

MAPP was developed through the leadership of the National Association of County and City Health Officials (NACCHO). (4) It follows previous public health system improvement strategies, such as Assessment Protocol for Excellence in Public Health (APEXPH) and the Operational Definition of a Functional Health Department, and it builds upon their foundation. MAPP is a community-wide process for improving community health and strengthening local public health systems. It provides a way for communities to use assessment information to set priorities, identify resources, and also to develop health improvement plans. It involves the engagement of the entire community in both assessing and planning for improvement of the community's health. Both community assessments and community health improvement plans can be developed through MAPP. As the NACCHO Fact Sheet of February 2010 states, "While the creation of a formalized community health improvement plan (CHIP) is not required in the MAPP process, MAPP provides all the information needed to create a formal CHIP." (5) MAPP does not produce a strategic plan, but it does provide the information upon which to develop a strategic plan for the agency. It can, in essence, create a strategic plan for the entire community of partners, from which the public health component can be shaped for the agency's strategic plan.

NPHPSP

NPHPSP was developed as a national effort.(6) It has the advantage of having a component for local agencies, another for state health agencies, and a third for the governing bodies of public health agencies. It is based on a system review, not just an agency review, and it uses the 10 Public Health Essential Services as a framework to assess capacity. NPHPSP is used to satisfy the local public health system assessment, which is on the four MAPP assessments. As state public health agencies do not have a comparable framework to MAPP, the NPHPSP state health system structure has been particularly useful to state public health agencies in their assessments.

Healthy People 2010

Healthy People 2010 is a comprehensive set of disease prevention and health promotion objectives for the Nation to achieve over the first decade of the new century. It identifies a wide range of public health priorities and specific, measurable objectives. It has two over-arching goals: Increasing the quality and years of healthy life and eliminating health disparities. (7)

HP 2010 and HP 2020 (which is under development) are used by some agencies to track performance and set goals.

Agencies have historically used the above frameworks, and others, to assess the health of their communities. MAPP or what is called a "modified MAPP", however, is clearly the most used of the frameworks, based on interviews for this study.

Major Findings

1. Agencies do not always see a sharp distinction between the Community Health Assessment and the Community Health Improvement Plan. The CHA and CHIP are seen as a continuous process, not delineated actions and timeframes. The MAPP process, which is heavily used by many agencies, also defines a continual process, not 2 actions with clear endings and beginnings. This carries over into delineation of costs as they tend to blur together. Some agencies do not think in terms of a cycle, e.g. produce a community health assessment every 3-5 years, but rather in terms of continually updating the data and investing every year. This is especially true of the larger and more sophisticated or experienced departments.
2. Some agencies do not see value in producing published community assessments, including having a report at all. The focus instead is on the availability of data and information in numerous ways. As one agency put it, "Our role is to be the go to place for data and information." The information can then be extracted and analyzed for different purposes, e.g. health disparities, tobacco prevention, teen pregnancy, etc. These agencies tend to be those with dedicated staff who keep the system maintained and robust, without a perceived need to produce one over-arching publication.
3. Local health departments have a higher rate of current community health assessments (63%) than tribal health organizations (44%).
4. Local health departments have higher rate of current community health improvement plans (49%) than state health departments (24%).
5. The following factors are correlated with local health departments having completed both a community health assessment and a community health improvement plan within the last 3 years:
    a. An epidemiologist or health educator on staff;

> *This is not a one-time investment. This is a long-term investment. It doesn't stop with the plan.*
>
> ***Julie Joh Elligers***
> ***Program Manager, NACCHO***

   b. Faculty or staff from an academic institution conducting program evaluation at the agency
   c. Behavioral risk factor data available at the local level for use by the agency

6. It is possible to find convergence on costs for medium to large agencies to perform assessments and plans. Key results include:

   - Larger local public health agencies have several dedicated FTE that work on assessment, planning, and evaluation. Examples in cost range from $225,000 to $450,000.
   - Middle sized public health agencies costs for assessments ranged from $62,279 to $170,918. CHIPs may add another 20% to the cost. The numbers tend to converge around the $100,000 level.
   - Small agencies need from $20,000 to $50,000 to do MAPP; however, some can reduce costs through using strategic partnerships with academia.
   - States vary in their roles as supporters of local health departments and initiators of statewide plans and assessments. There is some convergence around having 2.5 to 3 FTE at the state agency to support the work at an estimated cost of $187,500 to $225,000 for staff on an annual basis. Explicit costs of SHIPs vary as well. In general, the costs for a SHIP range from $50,000 to approximately $300,000.

7. The State Public Health Agency can play key roles in supporting local public health agencies with community assessments and community health improvement plans. This includes providing data (including rates), technical assistance, and templates. State agencies also can provide financial incentives. These have been supported with state funds, stimulus funding, tobacco tax settlement dollars, emergency preparedness grants, and Preventive Health Block funding.
8. While specific ranges of costs can be noted for an assessment, agencies also "make do", often using other community partners, leveraging the use of students from schools of public health and nursing schools. Thus, some agencies are able to perform an adequate assessment for a modest amount of resources.
9. Hospital relationships can help reduce the cost to the governmental public health agency. Some agencies have successfully worked with hospitals in their community to receive support for community health assessments.
10. Agencies respond very positively to even modest "incentive grants" to produce community assessments and improvement plans. With small amounts of money, agencies contribute major

amounts of in-kind time and services and are able to produce assessments and plans through creative leveraging and through leadership commitment at the local level.

State Agency Examples of Assessments and Planning

Staff members from 7 states were interviewed about their practices and costs related to statewide health assessments and state health improvement plans. These included Colorado, Nebraska, North Carolina, Oklahoma, Pennsylvania, South Carolina and Washington. The findings showed some convergence and some unique approaches and cost estimates. Several state staff noted that their SHIP has focused on the public health infrastructure rather than improving the health of the citizens.

Colorado

Colorado recently completed a statewide public health improvement plan which was mandated by a new public health law. The same legislation requires that In the future, local public health agencies must complete community health assessments and community health improvement plans. The cost to the state agency of supporting local agencies and developing the SHIP is 2.5 to 3 FTE plus $16,000 in travel and support for local community planning meetings. The printing of the plan cost $3000. The state is providing funding to local public health agencies to develop their assessments and plans through a phased approach. Funding is determined by population size. The amount of $25,000 is being given to agencies serving a population of 50,000 or more. Smaller agencies must combine for a regional service area of over 50,000 for a joint assessment. Six of these grants will be awarded per year over the next several years. The process at the local level is likely to be a modified MAPP process.

The state provides demographic data, vital statistics, injury hospital discharge data, and behavioral risk factor data online for larger counties and by regions for smaller counties.

Nebraska

Nebraska used the National Public Health Performance Standards Program for a statewide assessment, and through Turning Point developed a statewide public health improvement plan. The estimate for doing a new SHIP is $40,000-$50,000. Local health agencies were given $10,000 to do MAPP and given one year to complete it. They are now being given $15,000 and 18 months to do a new assessment. In addition, the state provides BRFSS over-sampling at a cost of $6000 per agency. (One local health director with 4 counties, 2 tribal reservations, and a population of 33,000 estimated that a proper budget for her agency would include one FTE with an annual cost of $50,000 to $60,000.)

In addition, the state health agency has provided $30,000 to $45,000 to some local agencies to implement their top priorities.

North Carolina

North Carolina has local assessments from their 85 local agencies, but the state agency has not pulled assessment information into a statewide assessment. They have had 3 rounds of a SHIP, but they do not feel that it meets the requirements of PHAB. The previous SHIPs have had the right people at the table, with partners and legislators, but the plans have focused on resources and legislation instead of health of the state. The cost of developing their SHIP is estimated at $75,000. Their strategic plans have a negligible cost as they have been done internally.

Oklahoma

The Office of Performance Management has 2.5 FTE who work on all aspects of performance management, including accreditation and planning. In addition, they spent $11,000 to $14,000 to develop a 168 page assessment report. The cost of their strategic plan was $30,000, which included a 2 day retreat and 10 site visits to vet the draft plan. They also provided a 30 day comment period.

While the state staff feels that they meet all prerequisites required for accreditation, the counties do not. They are working with 5 counties to implement MAPP and develop a plan and assessment. The state will provide training, technical assistance and support official functions for community meetings for the 5 counties.

Pennsylvania

Pennsylvania has a statewide improvement plan (SHIP) that includes their assessment information. They pay Pennsylvania State College $35,000 a year to research the data. Costs also include 2.5 dedicated FTE at the state agency. In addition, about 1.2 FTE of the regional office staff supports the effort. The next SHIP will also include 6 meetings around the state for a cost of $18,000.

The state also has a strategic plan that links to the SHIP.

They are moving toward a continuous process rather than 3 processes at set intervals.

Local partnerships can choose to become a SHIP affiliated partnership. These affiliates are not necessarily run by local health departments, although almost all have local public health involvement. In some communities the hospitals or a non-profit takes the lead. As an affiliate, the partnerships receive more direct access to state technical assistance, training, and grant information. In the past, the state offered to

over-sample BRFSS for about $17,000, but they are not offering this in 2010 or 2011. Local affiliates pay $10,000 to $25,000 to administer local community surveys.

South Carolina

South Carolina has not completed a health assessment and has not developed a statewide health improvement plan. The state agency does have a strategic plan. The agency has information about how the counties or regions in this centralized state might meet their prerequisites.

One third to one half of the counties have an assessment and/or a plan. While it makes sense from an efficiency perspective to do this work regionally, counties are where partnerships exist. SC has good data for local health agencies, down to zip code data in a query-based system. They have emergency room, hospital discharge, and state survey data available, in addition to the Vital Statistics information.

The estimate for all counties to have assessments and CHIPs is 1 FTE for every 4-5 counties. This would end up costing about $500,000 to $800,000, but all 46 counties would then have met the prerequisites.

Washington

Washington state has been involved in public health infrastructure improvement for many years. They are well known for their Washington standards which include measures for both local health departments and the state agency.

They have a statewide assessment called Health of Washington State. The initial development was quite heavy in staff time, requiring the efforts of 5-6 FTEs for one year, plus $60,000 for editing. Subsequent, and current, updates are less staff intensive, with estimates of 1.2 to 1.4 FTEs for a year. The report is updated every 3-5 years. With budget cuts, Washington may move to a "rolling process" of updating.

Washington has a Statewide Health Improvement Plan. Historically this document and process has focused primarily on improvement of the public health system infrastructure, rather than the health of the citizens. The costs for the PHIP were:

Staff Costs	$249,405
Meeting Costs	$24,528
Editor Consulting	$21,000
Total	$294,933

In 2010, they are moving to an approach which focuses on the health of the citizens as well. This is collaborative effort with many players. They do not intend to print copies, preferring to post the plan on-line, saving approximately $1000.

The Washington strategic plan is done in-house with little cost beyond staff time.

With the Multi-state Learning Collaborative (MLC III) grant funding, they are supporting 3 local health departments, as well as the state agency, in a collaborative to work on health improvement plans. Each local health department will receive $10,000 for their participation.

Large, Urban Public Health Agency Examples: Data, not a Periodic Report

Two agencies that serve populations over 1,000,000 have similar approaches to assessments and planning. Both think in terms of public health being the source for data, but neither relies on traditional and formal reports to meet the needs of their agency or their community. The large size of these departments creates a different dynamic regarding community assessment and community input challenges.

The largest health department in its state is very data-oriented but finds community input at the district level of less value. This agency finds MAPP too costly for the size of the population served with three counties, 11 hospitals, numerous cities, towns, school districts, and neighborhoods. Data, however, is key to the work of the agency. They do incorporate community input into program-specific purposes in particular areas of the district. They have over 100 advisory groups for specific programs and target populations. They also produce data reports for specific populations and profiles for the counties of the district. This department sees its role as the data source and the convener for other partners to implement much of the work on problems. The district has 3FTE who work on data, evaluation and planning. They will produce a community health assessment in the future, but only because it will be a state requirement. They envision a strategic plan which will define what the agency needs to do and how they will work with their partners.

Another large department which serves over 1,000,000 citizens also does not find community health assessment reports and community input for the entire department to be of much value. This agency values community input for specific programs, problems, and areas instead. They have a staff of 6 FTE housed in a Community Health Assessment, Planning, and Evaluation Group which supports all three functions. The Hospital Council in the county provides the department $120,000 every few years to produce a Community Health Indicators report, which is only a part of what would be included in a comprehensive community assessment. The department does not feel that $120,000 covers the full cost of the Indicators Report, but it is a good partnership with the hospitals in the county. There are 8 hospitals in the county, and the 3 non-profit hospitals are required to show community benefit and assessments. This department does

not do a formal strategic plan but sets priorities based on data and targets of opportunity.

Examples from the Middle

Most of the agency staff interviewed are in agencies that serve populations that are in a middle-sized range, i.e. 50,000 to 500,000 population. Some of these agencies have very specific budgets that show the costs of assessments, generally following the MAPP framework. There was some convergence of the costs. The range of the examples below is from $62,279 to $170,918.

> *Community action is the driver. The assessments get us to a strategic plan.*
>
> ***Dr. Mark Wallace***
> ***Weld County Health Department***

Example A, Population 65,000	
Personnel	$45,110
Operating	$5,735
Survey	$18,000 (paid by hospital system)
Total:	$68,845

Example B, Population 157,224	
Personnel	$103,763
Operating	$6,114
Travel	$2,500
Consultants	$16,500
Total:	$128,877

Example C, Population 251,494	
Personnel	$40,000
Contractors	$125,598
Supplies	$2,820
Meeting Costs	$2,500
Total:	$170,918

Example D, Population 254,759	
Personnel	$37,500
Operating	$24,799 (mail survey with printing and postage)
Total:	$62,279

Example E, Population 303,482	
Personnel	$80,000
Operating	$31,212
Total:	$111,212

Example F, Population 490,864	
Personnel	$90,000
Operating	$3,500
Consultants	$16,000
Total:	$109,500

Agencies generally had cost or budget data for assessments, but not community health improvement plans. However, there was a general sense that the community health improvement plans would add another 20% to the costs.

Smaller Agencies Need Assessments Too

Based on interviews with several consultants, a general observation is that a small agency can contract for an assessment for $20,000 to $40,000. One director of a rural department with a population of 33,000 stated that an annual investment of $50,000 to $60,000 would be optimal for continuing assessment and planning. Examples of small agencies using academic assistance to minimize costs are noted below.

The MAPP process paid off when we had the H1N1 activities.

Deb Scholten

NE Nebraska Public Health Department Director

Strategic Plans

Strategic plans are sometimes done internally with in-kind or pro-bono facilitators. When consultants are used the range is usually from $3000 to $8400. State agencies may incur higher expenses up to $20,000 with multiple day retreats and higher consultant costs.

Hospitals Can Be Strategic Partners

Several agencies have either benefited from partnerships with their local hospitals or health systems or are in current discussions with them regarding the linking of public health assessment needs with the health reform legislation requirement that nonprofit hospitals complete community health assessments and demonstrate community benefit. One large health system pays the cost of community surveys for the local

public health departments in their catchment area. Another group of hospitals contracts with its local health department to prepare health indicator reports. Several agencies noted that they are working with their local hospitals in their partner planning meetings with expectations of shared resources.

As noted by NACCHO in a recent report, the Patient Protection and Affordable Care Act requires that nonprofit hospitals conduct a community health needs assessment that "takes into account input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge of or expertise in public health." (8) Working with public health agencies is good for hospitals in many ways. They are able to draw on the data and expertise of public health, acquire important information about the needs of the communities they serve, and apply their contribution to their community benefit reporting to the IRS. Public health gains from a stronger partnership with the hospital or hospitals, has the opportunity to acquire assets to support community health assessments and improvement plans, and perhaps most importantly, the two entities now own both the problems and the solutions of their community in a stronger partnership. (8)

Using Academia to Do More with Less

Four organizations illustrate how using graduate students, faculty, and nursing students to complete their community health assessments is an economical approach for the agency. While the use of graduate students requires involved and conscientious faculty and does not support building planning and assessment infrastructure within the agency, it is a way for agencies to achieve results when resources are limited or non-existent for assessments.

> *I was happy with the help from the graduate students [from the School of Public Health]. They deserved an A+.*
>
> ***Jeff Stoll***
> ***Director, Broomfield Health Department***

One local health department serving just 8700 citizens spent only $1000 in out of pocket expenses, plus time of the Executive Director, which was estimated at 100 hours, and produced an extensive community needs assessment. This was done by tapping into a School of Public Health faculty member who teaches a course on community health assessments and also using students from a nursing school studying community health. The process involved a modified MAPP approach with analysis of secondary data, key informant

interviews, focus groups, and a community survey with 225 in-person interviews. The results were then shared with a citizens Health Advisory Committee which lead to a 2 page action sheet.

A suburban public health agency serving 55,000 also used students and the assistance of the NACCHO staff to produce a community health assessment for a minimal cost. This agency had key informant interviews and focus groups. They are now moving to priority setting with partners and have decided to hold additional focus groups on environmental health. Then, the Planning Steering Committee with key partners will help set priorities. The out-of-pocket costs have included travel for the NACCHO staff and refreshments and meals for the focus groups. Staff time was not tracked for the assessment. The director would like to have a full-time planner with an annual investment of about $70,000 and institutionalize an ongoing process. However, with limited resources, the director was very happy with the work of the students and faculty member.

Another 6 county region used the same public health class and professor as in the previous examples and produced an assessment and a plan for a total of $32,000. This area covers 80,000 population in an area larger than many states in the US. The process, again, mirrored a modified MAPP with secondary data, key informant interviews, 12 community meetings, and a published report. They also received pro bono facilitation from a local foundation for the 12 meetings. Their costs are estimated at $20,000 for the assessment and $12,000 for the plan. These costs include:

Personnel	$20,000
Travel	$5,000
Printing	$5,000
Refreshments, Food	$2,000
Total:	$32,000

In another state, a 10 county agency with a population of 750,000 was able to use a public health institute with graduate students to produce an assessment for $66, 960. This included work in each county with analyzing county specific data, conducting community surveys, conducting key informant interviews and focus groups, and preparing a report. Again, the use of graduate students kept the costs at a minimal level, even though the work was extensive.

Incentives Work

There are numerous examples of state public health agencies providing small amounts of funding to local health departments to complete community health assessments or develop CHIPs. These are in the ranges of $5000 to $25,000. The source of funding may be private funding (e.g. MLC III), tobacco settlement dollars, preparedness funding, federal stimulus dollars, federal Preventive Health Block, or any other federal or state source of money. Even though these small amounts of money are unlikely to cover all the costs, local public health agencies will and do compete to participate in these initiatives. This shows that even small incentives work for more local public health agencies to be preparing for voluntary national accreditation.

There may be numerous reasons for this enthusiasm for participating in underfunded work. Local public health leadership may want to improve their services and infrastructure and a small amount of money gives the boost needed to proceed. Also, state government may be requiring assessments, so any funding is appreciated. Regardless, incentives make a difference.

What's Been Done - States, Tribes, Locals

In order to identify the gap in meeting prerequisites, information on what has been done to date was examined. Results from the most recent surveys of state health departments(9;10), tribal health organizations(11) and local public health departments (12) were reviewed to estimate the percentage of these organizations that had recently completed community health assessments, community health improvement plans, and strategic plans.

State Public Health Agencies

The Association of State and Territorial Health Officials (ASTHO) 2007 Public Health Survey was completed by all 50 states and the District of Columbia. While 80 percent of states indicated that they have a statewide public health improvement plan in place, those plans may not be current. Results indicate that 12 out of 51 (24%) state public health agencies had developed or participated in the development of a health improvement plan for their state in the last 3 years.

Of those with an improvement plan, 95 percent expected to update their state plans within the next 3 years, and 68 percent with a plan say that the plan was developed using the results of a state health assessment.

No question was asked directly about state health assessments. However, in the last 3 years, several different health assessment and planning tools have been used on a state-wide basis by state agencies. Out of 50 state respondents to this question, in the last 3 years

- 37 (74%) had used NPHPSP;
- 36 (72%) had used a Turning Point Collaborative tool;
- 49 (98%) had used the Healthy People 2010 Objectives;
- 36 (72%) had used another tool developed by the state public health agencies.

The large numbers of state agencies that have used these tools on a statewide basis in the last 3 years suggest that health assessment and improvement planning is being done on a larger scale by state public health agencies than suggested by answers to the specific question on state health improvement plans. Approximately 76 percent or 38 out of 50 state agencies said that the agency have a strategic plan. Many states are required to develop plans that satisfy requirements for the Executive Branch or the state budget process. These are often more appropriately described as work plans rather than strategic plans. It is not clear whether the high rate of completion of strategic plans may reflect the development of the work plan as opposed to true strategic plans.

Data for a second ASTHO Public Health Agency Survey were collected earlier this year. As those results become available, information on state health improvement plans and strategic plans can be monitored to assess if the number of such plans has increased. Future questions more specific to statewide health assessments need to be added to this survey to better assess the gaps in statewide health assessments.

Tribal Health Organizations

The National Indian Health Board's survey of Tribal Health Organizations provides a profile of public health capacity among Indian health organizations. A web-based survey was distributed to 346 organizations including tribal health departments, the Indian Health Service, Area Indian Health Boards, and urban Indian health centers in October, 2009; 145 organizations responded to the survey. Results indicate that

- 44 percent of tribal health organizations conducted a community health assessment in the last 3 years;

- 77 percent expected to conduct one in the next 3 years.

A limited response (n=50) to a follow-up question about community health improvement plans leaves unclear what percentage of tribal health organizations are involved in developing such plans. No information on strategic planning was available. Due to limited responses to the survey and lack of information on community health improvement plans and strategic planning, more data are needed to confirm and understand these initial findings.

Local Public Health Agencies

A national survey of all local health departments by the National Association of County & City Health Officials (NACCHO) was done to assess public health capacity at the local level in 2008. The survey, sent to all local departments within the District of Columbia and 49 states, excluding Hawaii and Rhode Island, included questions on community health assessment and community health improvement plans. In 2008, responses were received from 2,332 local agencies; a response rate of 83 percent. Results indicated that in the last 3 years

- 63% of LHD completed a community health assessment;
- 49% had completed a community health improvement plan; and
- 44% had completed both within the last 3 years.

A sub-sample of LHDs was asked about strategic planning; among the 473 responses, 61 percent reported that they had done so in the last 3 years.

Local public health agencies were more likely to have completed a community health assessment than a community health improvement plan in the last 3 years. (Appendix 2) The percentage of LHDs that had completed both a community health assessment and a community health improvement plan in the last 3 year varied among states from 7 to 100 percent. (Appendix 2) A summary of the prevalence of completion includes:

- >75 percent completion --- 5 states and the District of Columbia;
- 50-75 percent completion --- 16 states;
- 25-49 percent completion --- 14 states;
- <25 percent completion --- 13 states.

The highest rates of completion occurred in states with both a low number of LHDs (e.g., the District of Columbia, New Hampshire) and those with over 100 LHDs (e.g., Missouri, New Jersey).

A limitation of these estimates is that agencies may not always use the same definition for community health assessments, community health improvement plans, and strategic plans. A small study in Colorado found that those filling out the study often used "what was in their heads" as the definition of community health assessment rather than checking with the definition given in the survey.(13) Further, the data may not be current. NACCHO is planning to redo the local survey in 2010. When available, those results can be used to have a more current picture of the rate of completion of CHAs and CHIPS nationally and by state.

In order to understand what factors are correlated with the completion of both of these prerequisites, data from the NACCHO survey were analyzed. The following factors were investigated to determine if they were associated with completion of both:

- population size;
- urban/suburban/rural jurisdiction
- the presence of a local board of health
- expenditures per capita
- an epidemiologist on staff;
- a health educator on staff; and
- the level of authority over LHDs within the state.

This last factor (level of authority) was broken down into three different categories:

- Local: all LHDs are unit of local government
- State: all LHDs are units of state government
- Mixed: some LHDs are units of local government and some are units of state government.

Initially, having an epidemiologist on staff and a health educator were investigated as separate factors. However, results were the same for whether the staff was an epidemiologist or a health educator and so these two variables were combined into one: the presence of either an epidemiologist or health educator on staff.

Table 1 gives the results of the initial analysis. The results show that those with the most resources, i.e. health educator or epidemiologist on staff and higher per capita expenditures, had higher rates of completion of both the CHA and the CHIP in the last 3 years. In addition, local departments in states where all the LHDs were units of the state government and those in the largest population also had the

highest rate of completion. No association was found between completing both and the presence of a local board of health or whether the agency was in an urban, suburban, or rural area.

Table 1: Factors associated with completing both a community health assessment and a community health improvement plan in the past 3 years: NACCHO National Profile of Local Health Departments, 2008

Factor	Percent completed both CHA & CHIP in the last 3 years
Total (n=2332)	44%
Population Size**	
Small (<50,000)	41%
Medium (50,000 - <500,000)	48%
Large (>=500,000)	55%
Health Educator/Epidemiologist on Staff***	
Yes	53%
No	35%
Governance of local health departments in the state**	
Local only	45%
State only	54%
Mixed: both state and local	36%

$^{**}p < .001$, $^{***}p < .001$

Table 1 (continued): Differences in distribution of expenditures per capita by completion of both a community health assessment and community health improvement plans in the last 3 years: NACCHO National Profile of Local Health Departments, 2008

Quartile of Distribution: Expenditures per capita*	Completed	Not Completed
25th percentile	$22	$19
50th percentile	$38	$34
75th percentile	$60	$58

$^{*}p < .01$

The factors associated with completion of both a CHA and CHIP are highly correlated with each other. In order to understand which of these factors may best explain completing both the CHA and the CHIP, a forward step logistic regression was done. Two variables continued to be statistical significant in this analysis as shown in Table 2. Those LHDs that had either an epidemiologist or a health educator on staff were over 2 times more likely to have completed both than those that had neither on staff. In addition, LHDs located in states where the governance of the LHDs was mixed were 40 percent less likely to complete both compared to agencies with states where the governance was all local. No difference in completion was seen between those with state only governance and those with local only governance.

Table 2: Results of multivariable analysis: Adjusted odds ratio for factors associated with completing both a community health assessment and a community health improvement plan in the past 3 years, NACCHO National Profile of Local Health Departments, 2008.

Factor	Adjusted Odds Ratio (95% Confidence Interval)
Health Educator/Epidemiologist on Staff	
Yes	2.3 (1.8 – 2.7)
No	1.0
Governance of local health departments in the state**	
Local only	1.0
State only	1.0 (0.5 – 1.8)
Mixed: both state and local	0.6 (0.4 – 0.8)

Factors entered included staff, governance, population size, and expenditures per capita.

A sub-sample of agencies was asked to complete separate modules in addition to the main questionnaire. Two of these modules contained information that was investigated for an association with completing these two prerequisites: partnerships with academic institutions and the availability of data within the agency's jurisdiction. Two separate analyses were done for these two question areas because they were asked in separate modules and thus answered by different agencies.

The second module of the NACCHO profile questionnaire asked agencies (n=473) if they have partnerships with academic institutions. The following were evaluated to see whether any of these factors were associated with completing both a CHA and a CHIP in the last 3 years:

- a relationship with a school of public health;
- a relationship with a 4 year academic program;
- a relationship with a 2 year institution;
- offering of student practicum through an academic institution;
- accepting of student interns from an academic institution;
- faculty/staff from an academic institution have conducted a program evaluation with the LHD.

Four of these were found to be significantly correlated with completing both a CHA and a CHIP (table 3). The forward step logistic regression analysis included these statistically significant variables and the two variables (staff and governance type) from the main questionnaire. Table 5 shows that in the logistic modeling of this sub-sample, having an epidemiologist or health educator on staff and having a partnership in which faculty/staff from an academic institution conducted a program evaluation with the LHD could best explain completing the two prerequisites.

Table 3: Academic partnership factors associated with completing both a community health assessment and a community health improvement plan in the past 3 years: Module 2, NACCHO National Profile of Local Health Departments, 2008.

Academic Partnership Factors	Percent completed both CHA and CHIP in the last 3 years
Relationship with a school of public health**	
Yes	53%
No	33%
Relationship with a 4 year academic program*	
Yes	53%
No	41%
Offers student practica**	
Yes	56%
No	44%
Faculty/staff have conducted program evaluation with LHD**	
Yes	62%
No	45%

*$p < .05$, **$p < .01$

Table 4: Results of multivariable analysis: Adjusted odds ratio for academic partnership factors associated with completing both a community health assessment and a community health improvement plan in the past 3 years, Module 2, NACCHO National Profile of Local Health Departments, 2008.

Factor	Adjusted Odds Ratio (95% Confidence Interval)
Health Educator/Epidemiologist on staff	
Yes	1.8 (1.1 – 2.9)
No	1.0
Faculty/staff have conducted program evaluation with LHD**	
Yes	1.7 (1.1 – 2.6)
No	1.0

Factors entered included staff, governance, relationship with school of public health, relationship with 4 year academic program, has student practicum, and faculty/staff have done program evaluation at LHD

Several questions in Module 3 of the NACCHO Profile questionnaire ask about the availability of various data at the local level. Respondents (n=447) were asked if the following data sources were available for their jurisdiction:

- vital statistics: death;
- vital statistics: birth;
- hospital discharge;
- behavioral risk factors;
- health department clinical data;
- disease outbreak investigation.

Vital statistics data and health department clinical data appear to be available to most LHDs. Over 90 percent of respondents said that these were available to them; availability of these data sources was not correlated with completion of both a CHA and a CHIP. Having health department clinical data was also not correlated with completion. Those agencies that had hospital discharge data available at their jurisdiction level and those that had behavioral risk factor data had statistically significant higher rates of completion than those that did not have these data sets. (Table 5) The logistic regression analysis including these two data sources, staff, and governance type resulted in staff and having behavioral risk factor

data available as the factors that could best explain the completion of both the CHA and the CHIP. (Table 6).

Table 5: Data sources at the local level associated with completing both a community health assessment and a community health improvement plan in the past 3 years: Module 3, NACCHO National Profile of Local Health Departments, 2008.

Data Available at the Local Level	Percent completed both CHA and CHIP in the last 3 years
Hospital Discharge Data**	
Yes	51%
No	39%
Behavioral Risk Factors**	
Yes	54%
No	30%

*$p < .05$, **$p < .0001$

Table 6: Results of multivariable analysis: Adjusted odds ratio for data source factors associated with completing both a community health assessment and a community health improvement plan in the past 3 years, Module 3 NACCHO National Profile of Local Health Departments, 2008.

Factor	Adjusted Odds Ratio (95% Confidence Interval)
Health Educator/Epidemiologist on staff	
Yes	1.6 (1.0 – 2.9)
No	1.0
Behavioral Risk Factors	
Yes	2.3 (1.4 – 3.8)
No	1.0

Factors entered included staff, governance, hospital discharge data available at local level, and behavioral risk factor data available at local level.

Having an epidemiologist or health educator on staff was associated with having completed both a CHA and a CHIP in all three analyses and underscores the importance of having appropriate staffing. Since these were cross-sectional data that were analyzed, a causal association cannot be assumed. It is unknown if the staff were at the agency at the time of the CHA and CHIP. However, it should be noted that one major reason given by Tribal Health Organizations for not being able to do community health assessments was lack of appropriate staff.(11)

Caution should be used in the findings from Module 2 and Module 3. Results from the analysis of academic partnership factors and data source factors were limited to a sub-sample of all respondents. It is unknown if these agencies differed is some unmeasured ways from all agencies in the sample. Yet, both of these factors were mentioned by local health department personnel in the qualitative interviews giving more validity to the quantitative analysis of the two modules.

Summary

While the data is not exact, public health does have reasonable estimates of both the costs of completing the prerequisites and the gap that exists in their completion nationwide. The information can be used to access additional funding for agencies to be able to consider applying for accreditation by meeting the prerequisites or merely to define and further quantify the gap.

PHAB should consider whether requests for reports, whether printed or electronic, are necessary for assessments, if agencies can show that considerable data and analysis capability exists in the agency. This is especially true for larger agencies and state agencies, but also for some of the more experienced middle sized agencies.

Some agencies have shown ways to reduce costs by using graduate schools of public health and community nursing programs to support assessments. A stronger partnership with the academic community should be encouraged and nurtured. Dialogue with the Association of Schools of Public Health, and especially, Centers for Public Health Practice, may yield useful results.

Incentives make a large difference, even if those incentives are modest. The small amount of support for assessments and planning appear to leverage results. The public health community should consider fostering incentive programs.

Some of the public health agencies are very enthusiastic about assessment and planning, whether they plan to apply for accreditation or not. There may be opportunities to funnel some of this enthusiasm into peer assistance and nurturing of champions.

Partnerships with hospitals, especially those nonprofits with obligations under community benefit, can help resource assessment and community planning.

Finally, there are excellent examples around the country of high quality work and innovative approaches that can and should be shared and used as effective practices and seen as centers of excellence.

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Appendix 1: Methodology

Exploration of S/CHA and S/CHIP and strategic plans was done using both quantitative and qualitative methods. To understand what has already been done in the field, secondary data sources were used:

- the Association of State and Territorial Health Officials' (ASTHO) 2007 Public Health Survey;
- the National Indian Health Board's 2009 survey of Tribal Health Organizations;
- the National Association of County & City Health Officials (NACCHO) 2008 survey of Local Health Departments.

Published documents for all 3 surveys were reviewed for findings on prerequisites. In addition, the 2008 NACCHO profile data set was analyzed to determine the prevalence of the completion for both a community health assessment and a community health improvement plan by state within the 3 years prior to the survey. Further analyses were done to assess which factors were correlated with having completed both a CHA and a CHIP in the past 3 years. Factors evaluated were determined prior to analysis and included:

- population size;
- urban/suburban/rural jurisdiction
- the presence of a local board of health
- expenditures per capita
- an epidemiologist on staff;
- a health educator on staff; and
- the level of authority over LHDs within the state;
- academic partnerships; and
- availability of data at the local level.

Factors found to be significantly associated ($p<.05$) with completion of both prerequisites were then entered into a forward step logistic regression model to understand which of the variables best explained completion.

The qualitative aspects of this project included interviews with a convenience sample of 46 public health professionals and leaders involved in S/CHA, S/CHIP, and strategic plans at both the state and local level. Individuals interviewed were selected based on the authors' knowledge of individuals who had been involved in these processes as well as recommendations of interviewees. Those interviewed included:

- 24 people representing 17 different local health agencies
- 11 people representing 7 different state health agencies;
- 7 people representing 3 national public health organizations;
- 2 people who provide consulting services for these areas;
- 1 faculty member of a school of public health providing partnerships in community health assessment and 1 institute staff member located in a university

Interviews were open-ended; the authors had developed a list of areas that needed to be covered for all interviews prior to starting this qualitative process. Interviews were done by telephone and in-person. In-person interviews took place with five agencies and at a focus group with 9 local health professionals at the NACCHO Annual Meeting, Memphis, TN, on July 15, 2010. All other interviews were done by telephone. At the conclusion of the interviews, many people were able to send more specific information on budgets and expenditures committed for prerequisites. These documents were added to the interview information.

Both authors took separate notes during the interview process. Conclusions to these interviews were reached by the authors jointly reviewing notes from the interviews and abstracting the salient points.

Appendix 2

This table shows the ranking by state: of the percentage of Local Public Health Departments (LHD) who have done a community health assessment (CHA) in the last 3 years. Also included are the percentage of LHDs within each state that have done community health improvement plans (CHIP) in last 3 years. NACCHO: National Profile of Local Health Departments, 2008.

	# of LPHD[1]	# of LHD Responded* to CHA question	% CHA in last 3 years**	# of LHD responded to CHIP question***	% CHIP in last 3 years****
New Hampshire	2	2	100%	2	100%
South Carolina	8	8	100%	7	71%
Washington, DC	1	1	100%	1	100%
New Jersey	111	110	96%	107	91%
Missouri	114	103	94%	100	86%
Illinois	93	93	94%	91	84%
Maine	10	10	90%	10	10%
North Carolina	85	83	88%	81	77%
Pennsylvania	16	15	87%	14	71%
Nebraska	24	23	83%	21	76%
Arkansas	78	78	81%	74	61%
Michigan	45	41	78%	40	58%
Florida	67	67	76%	64	66%
Vermont	12	12	75%	12	75%
California	62	48	75%	46	35%
Utah	12	9	75%	6	33%
Tennessee	95	94	74%	89	66%
West Virginia	49	41	73%	39	59%
Iowa	102	94	73%	91	73%
Minnesota	74	74	73%	73	56%
New York	58	54	72%	51	61%
Ohio	129	98	71%	91	42%
Washington	34	31	71%	31	45%
Colorado	65	58	70%	55	65%
Kentucky	56	45	69%	41	44%
Wisconsin	92	88	67%	87	57%
Georgia	158	76	67%	71	38%
Maryland	24	24	67%	21	43%
New Mexico	5	3	67%	3	67%
Alaska	8	8	63%	8	50%
Louisiana	10	8	63%	7	43%
Montana	51	38	61%	37	27%

Oregon	34	31	58%	31	42%
Arizona	15	14	57%	15	7%
Virginia	35	34	56%	35	40%
Mississippi	9	9	56%	9	33%
Wyoming	23	23	55%	21	33%
Delaware	2	2	50%	2	50%
Oklahoma	69	60	43%	56	41%
Texas	107	65	43%	63	17%
Indiana	93	62	41%	58	19%
Connecticut	80	59	29%	55	24%
Alabama	67	65	29%	65	32%
Idaho	7	7	29%	6	33%
North Dakota	28	28	29%	26	12%
Massachusetts	353	139	27%	199	14%
South Dakota	8	8	25%	8	50%
Nevada	14	14	25%	11	27%
Kansas	100	93	23%	89	13%

[1] National Association of County & City Health Officials, 2008 National Profile of Local Health Departments, NACCHO, Washington, DC, 2009
**Includes LHD that did not respond to the survey and those with missing data*
***Percentage of all LHD within the state that responded to the CHA question*
****Includes LHD that did not respond to the survey and those with missing CHIP data*
*****Percentage of all LHD within the state that responded to the CHIP question*

Appendix 3

Below are the percentage of local public health departments (LHD) by state that have completed both community health assessment (CHA) and community health improvement plan (CHIP) in the last 3 years. The table includes the number of known LHDs for each state that have not completed both by population size. NACCHO: National Profile of Local Health Departments, 2008.

	# of LHD[1]	# of LHD Responded*	% completing both CHA/CHIP**	Number of LHDs not completing both CHA/CHIP within the last 3 years			
				Population Size***			
				Small	Medium	Large	Data Not Available
Alaska	8	8	50%	2	2	0	0
Alabama	67	65	20%	32	20	0	2
Arkansas	78	74	51%	27	9	0	4
Arizona	15	14	7%	3	8	2	1
California	62	46	33%	10	14	7	16
Colorado	65	55	53%	19	4	3	10
Connecticut	80	55	16%	26	20	0	25
D.C.	1	1	100%	0	0	1	0
Delaware	2	2	50%	0	0	1	0
Florida	67	64	58%	9	14	4	3
Georgia	158	70	36%	25	17	3	88
Iowa	102	91	65%	30	2	0	11
Idaho	7	6	33%	0	4	0	1
Illinois	93	91	82%	12	4	6	2
Indiana	93	57	16%	32	16	0	36
Kansas	100	89	11%	71	7	1	11
Kentucky	56	41	37%	16	10	0	15
Louisiana	10	7	14%	0	3	3	3
Massachusetts	353	196	11%	18	3	1	157
Maryland	24	21	43%	3	4	5	3
Maine	10	10	10%	1	8	0	0
Michigan	45	40	50%	3	15	2	5
Minnesota	74	73	53%	26	8	0	1
Missouri	114	100	82%	15	3	0	14
Mississippi	9	9	22%	0	6	1	0
Montana	51	37	27%	24	3	0	14
North Carolina	85	81	73%	8	14	0	4
North Dakota	28	26	8%	22	2	0	2

Nebraska	24	21	76%	4	1	1	3
New Hampshire	2	2	100%	0	0	0	0
New Jersey	111	107	91%	8	2	9	4
New Mexico	5	3	67%	0	0	1	2
Nevada	14	11	18%	6	3	0	3
New York	58	51	41%	8	19	3	7
Ohio	129	91	35%	29	29	1	38
Oklahoma	69	56	29%	12	3	1	13
Oregon	34	31	35%	8	10	2	3
Pennsylvania	16	14	64%	1	1	3	2
South Carolina	8	7	71%	0	0	2	1
South Dakota	8	8	25%	0	6	0	0
Tennessee	95	88	61%	26	7	1	7
Texas	107	60	17%	19	26	5	47
Utah	12	6	33%	2	1	1	6
Virginia	35	34	38%	0	20	1	1
Vermont	12	12	67%	3	1	0	0
Washington	34	31	39%	10	8	1	3
Wisconsin	92	87	52%	30	12	0	5
West Virginia	49	39	51%	13	6	0	10
Wyoming	23	21	24%	16	0	0	2

[1] National Association of County & City Health Officials, 2008 National Profile of Local Health Departments, NACCHO, Washington, DC, 2009
**Includes LHD that did not respond to the survey and those with missing CHA/CHIPs data*
***Percentage of all LHD within the state that responded to both CHA and CHIP survey questions*
**** Small: <50,000*
Medium: 50,000 – 499,999
Large: 500,000 or more